

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows.

1. (Currently Amended) A method for forming a drill bit body, comprising:

selecting ~~inserting~~ at least one displacement ~~into a mold~~, wherein the at least one displacement comprises:

a substantially cylindrical body having a diameter selected to substantially conform to the radius of a cutting element having a diamond table; and

a projection adapted to form a relief groove in the drill bit body, wherein the relief groove is positioned under the diamond table of the cutting element when the cutting element is mounted on a mounting pad formed in the drill bit body, wherein a width of the relief groove is selected so that the relief groove extends back from an outer surface of the drill bit body at least about 40 percent of that portion of a thickness of the diamond table which does not extend past the outer surface of the drill bit body;

inserting the displacement into a mold; and

infiltrating powdered tungsten carbide with a binder alloy in the mold to form from said displacement said mounting pad and said relief groove in the drill bit body;

~~heating the powdered tungsten carbide and the binder alloy to the melting point of the binder alloy~~;

~~forming, from the inserted displacement, a mounting pad on the drill bit body for a cutting element having a diamond table~~; and

~~forming the relief groove in the drill bit body positioned under the diamond table of the cutting element when the cutting element is mounted on the pad, wherein a width of the relief groove is selected so that the relief groove extends back from an outer surface of the drill bit body at least about 40 percent of that portion of a thickness of the diamond table which does not extend past the outer surface of the drill bit body~~; and

~~wherein the substantially cylindrical body of the displacement has a diameter selected to substantially conform to a radius of the cutting element.~~

2. (Cancelled)
3. (Previously Presented) The method as defined in claim 1 wherein the at least one displacement comprises a castable material formed into a single body.
4. (Previously Presented) The method as defined in claim 1 wherein the projection extends past an external surface of the displacement by about 0.025 inches.
- 5.-11. (Cancelled)
12. (Currently Amended) A method for forming a drill bit body, comprising:
- ~~selecting~~ inserting at least one displacement ~~into a mold~~, wherein the at least one displacement is a single component comprising:
 - a substantially cylindrical body having a diameter selected to substantially conform to the radius of a cutting element having a diamond table; and
 - a projection adapted to form a relief groove in the drill bit body, wherein the relief groove is positioned under the diamond table of the cutting element when the cutting element is mounted on a mounting pad formed in the drill bit body;
 - inserting the displacement into a mold; and
 - infiltrating powdered tungsten carbide with a binder alloy in the mold to form from said displacement said mounting pad and said relief groove in the drill bit body;
 - ~~heating the powdered tungsten carbide and the binder alloy to the melting point of the binder alloy~~;
 - ~~forming a mounting pad on the drill bit body for a cutting element having a diamond table~~; and
 - ~~forming the relief groove in the drill bit body positioned under the diamond table of the cutting element when the cutting element is mounted on the pad~~;
 - ~~wherein the substantially cylindrical body has a diameter selected to substantially conform to a radius of the cutting element~~.
13. (Previously Presented) The method as defined in claim 12 wherein the relief groove has a depth of about 0.025 inches.

14. (Previously Presented) The method as defined in claim 12 wherein the relief groove extends back from an outer surface of the blade at least about 40 percent of that portion of a thickness of the diamond table which does not extend past the outer surface.